# Green Audit Report.

**Water Audit Report** 

### **Green Audit was conducted by**

# **Quality Certification Services.**

Saket 101, Shivaji Park, Dadar (W), Mumbai - 400028.

### **Green Audit was conducted by**

CA. Dr. Ashis .Arun. Palkhiwale.

# **Green Audit was conducted Online without Actual Physical Visit.**

**16**<sup>th</sup> January **2023**.

# For Green Audit the Data considered for the Period

July 2021 to June 2022.

#### **Inclusions & Exclusions while performing the Green Audit.**

- 1) Carbon emissions due to Students Travelling is not considered.
- 2) Carbon emissions due to Faculty & Staff Travelling is not considered.
- 3) Carbon emissions during Industrial Visits travelling not considered.
- 4) Carbon emissions from the Construction of Building are not considered as the Building is more than 10 Years old.
- 5) All Wood is more than 6 years old so not considered. (Classroom Faculty Platforms).
- 6) Plywood is not considered as Plywood is already recycled.
- 7) Total Consumption of Electricity for the Institute is considered.
- 8) Total Consumption of Water for the Institute is considered.
- 9) LPG Cylinders are consumed in Laboratories & in Pantry.
- 10) Green Cover is considered of the Institute premises.
- 11) Emissions from Tiles, Paints & Printers are not considered.
- 12) Ambient Air Quality Monitoring is not performed as it was an Online Remote Audit.
- 13) Analysis of Water entering the drains / soak pits is not performed. as it was an Online Remote Audit. (Sewage water, Lab washing water, Washing & Cleaning water) is let out in drains.
- 14) Raw Water Analysis is not performed as it was an Online Remote Audit...
- 15) Radiation due to Wifi & Mobile Phones is not considered.

## Air.

Since it was an Online Remote Audit. Ambient Air Quality was not monitored. Ideally it should be monitored at 12 locations depending on the area of the Institute.

Stack Emissions of the Diesel Generator has also to be monitored.

## Paper.

Each A 4 paper is used from both the sides.

After use on both the sides then it is sold to Old Paper Merchant.

To the extent possible use of soft copies of documents is promoted.

No details of Paper Consumption is provided So unable to calculate the Paper Consumption.

### Water.

#### Water used for

Drinking. Cleaning. Washing & Flushing. Gardening. In Laboratory.

There is no water meter installed. So the measurement of raw water intake cannot be ascertained from the Water Meter reading.

# **Consumption of Water given is 250 Liters Per Day So considering 360 Working Days**

**Total Consumption of water from July 2021 to June 2022 will be** 

250 Liters per day X 360 Working Days = 90,000 Liters

So the Water Foot Print is 250 Liters of Water Per Day.

A separate Water Foot Print Certificate is given to the Institute.

Currently no measures are being taken to save water or to recycle water.

# **Electricity.**

Total Consumption of Electricity is ideally to be considered from the Meter reading shown in the Electricity Bill.

#### **Electricity used for**

Tube Lights, Lights & Fans, Computers & Printers, To run the Utilities.

The details of the Electricity Units consumed from April 2020 to January 2021 are as below **But these readings are after netting off the 12 KW generated by Solar Plant which is fed into Grid.** 

Sr No.	Month/ Year	<b>Units Consumed</b>	
01	July 2021	1238	
02	August 2021	<i>1557 *</i>	
03	September 2021	<i>1557 *</i>	
04	October 2021	<i>1557 *</i>	
05	November 2021	1646	
06	December 2021	1468	
07	January 2022	1290	
08	February 2022	1808	
09	March 2022	2113	
10	April 2022	2237	
11	May 2022	1843	
12	June 2022	2310	
TOTAL		20624	
Mo	nthly Average	<i>1718.67</i>	

<sup>\*</sup> Actual Reading of August to October 2021 not provided so taken on an Average of Nov & Dec 2021

#### Power Generation by running the Diesel Generator.

No Data for Diesel Consumption provided so Unable to provide the details of Diesel Consumption.

#### **Measures taken for Energy / Electricity Conservation.**

- 1) Replacing the conventional Florescent Tube Lights with LED Tube Lights. (nearly 70% are replaced).
- 2) Replacing the CFL Blubs with LED Bulbs. (nearly 80% are replaced).
- 3) Periodic Maintenance of the Diesel Generator to get Optimum performance.

#### Prin. T. A. Kulkarni Vidyanagar, Nashik – 422005.

## **LPG Consumption**

**Liquefied Petroleum Gas.** 

8 LPG Cylinders for the period selected (July 2021 to June 2022)
(In Each LPG Cylinder the gas is 14.2 Kg is taken as base)
So in a period of 12 Months the Total consumption of LPG gas was
14.2 Kg X 8 = 113.6 Kg. so a Monthly Average of 9.47 Kg per month.

#### So Following is the Calculation of the Carbon Foot Print.

#### **Calculation of Kg of CO2 emissions**

1	2 As per ISO 14064	3	4	5
Category	Kg of CO2 per unit of consumption	Average Monthly Consumption	Calculation 2*3	Total Kg of CO2 2*3=5
Electricity	4.3 Kg Per Unit	1718.67 Units	1885.2 X 4.3 =	7390.28
Diesel	2.68 per liter			
Petrol	2.31 per liter	NA		
LPG	1.51 per Kg	9.47 Kg.	7.1X 1.51	10.72
TOTAL				7401

So the Average Monthly CO2 Emissions are 7401 Kg of CO2.

A separate Carbon Foot Print Certificate is given to the Institute.

## **Green Cover Details.**

Green cover area in the campus as a percentage of the total area is not calculated.

Various Types trees planted in the campus.

There are currently **180 Trees** in the Institute Campus.

Out of those 180 Trees there are **150 Trees** whose Height is more than **3 Meters.** 

Additional trees will be planted in the Academic year 2022- 2023.

# **Hazardous Waste Disposal**

E waste is collected & sent to Gokhale Education Society, Nashik. Institute does not dispose it on their own.

Used Batteries are given in Buy Back to the Supplier of New Batteries.

Laboratory Waste & Used Chemicals & Reagents are diluted & let out in a pit specifically prepared for Chemical waste.

# <u>Suggestions for Environment / Green Audit / Water Audit related activities to be carried out by the Institute.</u>

- 1) STP (Sewage Treatment Plant) can be installed for processing & reusing the Sewage waste water.
- 2) The Flushing Tanks of WC (Toilets) to be modified such that only half gets filled & thus while flushing only half of the water is used.
- 3) Drip irrigation can be implemented for the Trees.
- 4) To fit the atomizer devise to taps to save water.
- 5) Testing of the water in the drain as it is directly going into the soil.
- 6) Motion sensors can be fitted for the Light fittings in Washrooms, Lift and Lobby where continuous usage is not there.
- 7) Survival rate of planted trees to be monitored.
- 8) In the next Green Audit to test the Ambient Air Quality at least at 12 Locations.
- 9) To test the Diesel Generator Stack Emissions.
- 10)To verify the radiation from Wifi & Mobile phones.
- 11)To conduct Poster & other Innovative Environment Idea Competition among students.

# The Above Report is prepared based on the Records & Facts given by the Office bearers of Institute.

#### CA. Dr. Ashis .Arun. Palkhiwale.

(ACA, GDCA, Mcom, Msc (Env Sc). MA (Eco), PhD (Env), Automobile Engg, DISA, DFM, DAM, DPT, DCL & DJL) **Lead Auditor & Trainer for** 

ISO 9001, 14001, 45001, 20000, 22000, 27001, 50001, 14064, 14046 & OHSAS 18001, SA 8000, BS 25999 & CG, CSR, SOX, CDM.